

ABSTRACT

Development of base plans in U.S. milk markets is discussed, as are the history of enabling legislation which provides for Class I base plans in Federal order markets and the extent of Class I base plan implementation in Federal orders. Also examined is the impact of various base plans on milk supply response and their potential as supply control systems. Problems are identified that are likely to arise if base plans are used to control milk supplies effectively.

Key Words: Milk, Pricing, Cooperatives, Base plans, Supply response, Supply control, Marketing.

PREFACE

Many interacting forces are at work in the fluid milk marketing system. Economic factors examined here represent only one input into the policymaking process. Thus, readers should apply their own criteria in interpreting results of the analysis and likely consequences of base plans as supply management alternatives from the viewpoint of the dairy industry, consumers, and society.

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SUMMARY

In States with a high proportion of fluid milk marketed under closed-base plans of cooperatives, milk deliveries increased significantly more during 1965-70 than in States with a small proportion marketed under such plans. Apparently, use of cooperative closed-base plans does not automatically curtail increases in supply which constitute a recurring problem in the dairy industry.

Also, milk production in Federal order markets with base-excess seasonal plans rose more from 1965 to 1970 than in a "core" group of Federal order markets that did not have such plans. Additionally, the relatively closed Class I base plan provisions in the Puget Sound, Wash., order did not limit production, compared with those in the core markets. Since Class I base plan provisions of the Agricultural Act of 1970 are similar to provisions of base-excess seasonal plans, Class I base plans under Federal orders may not be effective supply control measures. Their influence may instead enhance supplies.

Given current legislation, cooperatives' closed-base plans probably can manage milk production more effectively than Federal order Class I base plans. If cooperatives decide to operate their own supply control systems, they can do so alone or in conjunction with Class I base plans under Federal orders.

Impact of restraints on different producers may be quite varied; thus, there are several crucial issues related to closed-base plans: (1) market rights; (2) capitalization of base; (3) resource adjustment; (4) parity of income for dairy farmers; (5) income distribution among producers; and (6) general welfare. Apparently, a direct correlation exists between the extent to which base or quota plans are used as supply control measures and the number and degree of problems likely to arise from these plans. Scope and magnitude of such problems will depend largely on the degree to which base or quota plans are used to help maintain a price structure substantially above market clearing levels.

Cooperatives' base plans in local fluid milk markets antedate both the Federal milk market order system and State milk control laws. During the 1930's, seasonal base-excess plans were established under the Federal license system and various base plans were initiated under State control programs.

During 1965-70, there was a major shift in emphasis of enabling legislation. In 1965, supply control was a prominent objective of Federal order Class I base plans; but by 1970, income distribution and market access appeared to be primary objectives.

Title I of the Food and Agriculture Act of 1965 authorized Class I base plans in Federal milk orders through December 31, 1969. The first Class I base plan was adopted in the Puget Sound marketing area in September 1967, after the U.S. Department of Agriculture (USDA) ruled that Puget Sound's excess milk production represented the type of situation which the Congress believed could be remedied by a Class I base plan. However, USDA denied use of such a plan in the Southeastern Florida order because no surplus existed in that market. Following an extension without change through December 30, 1970, Class I base plan provisions were revised by Title II of the Agricultural Act of 1970. Class I base plans issued before December 31, 1973, can be extended through December 31, 1976.

As of December 1, 1971, two public hearings had been held concerning adoption of Class I base plans under the 1970 act. The revised Class I base plan was implemented in the Puget Sound market in July 1971; and in that same year, USDA approved a Class I base plan for the Georgia market. After approval by at least two-thirds of producers who participated in a referendum, the plan became effective March 1, 1972. Apparently, interested parties in a number of other markets are considering petitioning for hearings on Class I base plans.

BASE PLANS IN U.S. MILK MARKETS:

DEVELOPMENT, STATUS, AND POTENTIAL

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INTRODUCTION

One criticism of the present milk marketing system is that a level of prices which will assure an adequate but not excessive supply of milk for consumers may not yield an adequate return to dairy farmers. Thus, bargaining cooperatives attempt to negotiate prices higher than could be expected under equilibrium supply-demand conditions. However, if pay prices to producers 1/ are maintained for an extended period of time at a level substantially higher than supply-demand conditions warrant, excess resources probably will be attracted into milk production, resulting in surplus milk supplies. In such a situation, supply adjustments must be brought about by something other than price. Currently, Class I base plans are receiving much attention as a potential method of restricting attraction of excess resources and avoiding an undue buildup of supplies.

Class I base plans can be effective only insofar as they provide the necessary incentives and framework for realizing intended objectives. Base plans are part of the total environment in which production decisions are made and put into effect. In recent years, the dairy industry has experienced rather dramatic changes in production and marketing as well as efforts to influence milk supplies and use. These experiences should provide some meaningful clues as to what problems and adjustments might be expected under Class I base plans.

For a number of years prior to 1964, dairying, as well as most other segments of agriculture, was plagued by problems of overproduction and surplus. Total U.S. milk production reached an alltime high of 127 billion pounds in 1964. Product stocks removed from the commercial market by programs of the U.S. Department of Agriculture (USDA) were building up and becoming unwieldy. Milk fat removed from the commercial market by Government programs reached 9.1 percent of total marketings and solids-not-fat 14.3 percent in 1962. Despite relatively low returns to dairy farmers, surplus milk supplies continued. Much research effort and concern during the latter 1950's and early 1960's centered around the urgent need for taking resources out of dairy production and putting them into income-improving enterprises.

1/ Minimum prices specified by regulatory agencies plus any amounts negotiated by cooperatives and paid to producers.

By late 1964 and early 1965, the upward trend in milk production began to slacken. Instead of production controls, higher milk prices were said to be needed to assure adequate milk supplies. As a result and because of uncertainty about the future supply-demand situation, both price supports for manufacturing-grade milk and Federal order prices were increased substantially, beginning in 1966.

From 1964 to 1970, the support price for manufacturing milk rose from \$3.15 to \$4.93 per hundredweight. Most of this 57-percent increase has occurred since 1966. During this same period, the average Class I price under the Federal order system increased from \$4.87 to \$6.74. In addition, producer cooperatives negotiated substantial amounts above minimum Federal order Class I prices.

Despite these increased prices--and probably because of a lag in production response--the supply-demand situation in the dairy sector of the agricultural economy attained a relatively favorable balance during 1966-70. However, now aggregate milk supplies are increasing. If they continue to do so, excess milk supplies will build up, posing a threat to market stability and producer incomes. Base plans are being suggested as a method of restricting production increases and handling the potential problem of excess milk.

Producer cooperatives have operated various types of base plans on a local market basis dating back to the early part of this century. Several States--primarily in the South in predominantly short supply areas--have used base or quota plans since the early 1930's. Base-excess seasonal pricing plans have also been administered under the Federal order system since the early 1930's. However, Class I base plans were not authorized until 1965, when Title I of the Food and Agriculture Act of 1965 amended the Agricultural Marketing Agreement Act of 1937. By the Agricultural Act of 1970, authority for Class I base plans in Federal order markets was extended and amended, generally providing greater flexibility. Additionally, Class I base plans issued before the act's December 31, 1973, expiration date could be extended to, but not beyond, December 31, 1976. Puget Sound, Wash., was the only Federal order market to operate a Class I base plan under the 1965 act and is continuing to do so under provisions of the 1970 act. A Class I base plan for the Georgia market became effective March 1, 1972.

Milk production is subject to considerable adjustment. As they respond to changes in weather, prices of products and inputs, regulatory activities, market outlets and other factors, producers seek to improve their income positions by varying resources (land, labor, cows, other capital, and management) which they commit to milk production. These adjustments alter the flow of milk--both in the aggregate and among groups of producers. Producers can be expected to adjust to any supply management plan which might be initiated--the response would depend on how the incentives of the plan affected their overall situation.

Changing Structure of the Fluid Milk Marketing System

A number of major changes in the fluid milk marketing system have been occurring over the years. More recently, some dimensions of change have accelerated. Recent consolidation, merger, and federation developments among dairy cooperatives have increased their market power. 2/ Within the cooperative, milk processor, and food chain segments of the marketing channel, various forms of vertical coordination--both backward and forward--have been supplanting the open market pricing system. In addition, the sphere of influence of the remaining decisionmaking entities--both in raw milk procurement and fluid milk product distribution--has mushroomed over extensive geographic areas. The local nature of fluid milk marketing has become regional and even national. Other dynamic developments that have influenced fluid milk marketing include:

- 1.--Accelerated shift of manufacturing-grade milk to Grade A production;
- 2.--Operation of a standby pooling system for fluid milk markets;
- 3.--Higher quality standards on manufacturing-grade milk;
- 4.--Increased mobility of the population with continued shifts to major metropolitan areas and generally to the Southwest and West;
- 5.--Decline in aggregate level of fluid milk consumption; and
- 6.--Milk procurement and distribution areas that are vastly expanding because of changes in technology, milk transportation systems, and characteristics of firms within fluid milk marketing channels.

Most of these developments point to underlying forces which have changed the historical concept of marketing fluid milk in local markets. In this evolving environment, a viable marketing system should provide for resource adjustment in milk production and marketing; equity in milk pricing, pooling, and sharing returns from milk sales among producers; equity among firms within the industry; and general interests of society. The question is whether base plans can be used effectively as supply management tools while fulfilling these requirements within the changing dairy industry.

Scope of Study

The purpose of this study is to give a brief background of milk supply management plans, the types currently in existence, and their potential. The scope includes base plans of various types operated by producer cooperatives and State milk control agencies, and under Federal milk orders.

To cover this broad spectrum in one study, it was necessary but difficult to arrive at a comprehensible set of terms or definitions. A glossary of these terms is included in the appendix. Generally, plans concerned primarily with evening out milk marketings within the year are referred to as base-excess seasonal plans and plans whose main purpose is to regulate milk marketings from year to year are referred to as Class I base plans.

2/ A general picture of recent developments in the cooperative sector of the fluid milk marketing system can be found in (3). Underscored numbers in parenthesis refer to items in literature cited.

While this report concentrates on Class I base plans, base-excess seasonal plans are also examined for several reasons:

- 1.--Many basic principles and provisions of base-excess seasonal plans also apply to Class I base plans.
- 2.--Seasonal base-excess plans have effectively encouraged more even milk marketings from month to month within the year, but such equalization apparently has resulted more from increased milk marketings in short-production months than from decreased milk marketings in months of flush production. This situation implies that base-excess seasonal plans have some features that enhance milk supplies annually, compared with alternative seasonal pricing and pooling plans. Therefore, to the extent that similar underlying principles and provisions are incorporated in Class I base plans, an upward bias should be expected in total milk marketings from year to year.
- 3.--Producers that market milk under seasonal base-excess plans seemingly develop a base plan production and marketing philosophy that probably affects their attitudes toward Class I base plans.
- 4.--Finally, no clear dividing line occurs between seasonal base-excess plans and Class I base plans. The mix of base-building, base-payout, and base-transfer provisions can be altered under both types of plans to achieve many of the same objectives.

Given these assumptions, this report discusses general types and provisions of base plans, gives a history of those operated by cooperatives, and lists more recent developments. The legislative history authorizing Class I base plans under Federal orders is reviewed, and development of Class I base plans under the Federal order system is traced. Also analyzed are effects of seasonal base-excess and Class I base plans on supply response.

Issues related to the use of Class I base plans as supply management tools are discussed, as are limitations of local or regional supply control programs when excess milk supplies represent a nationwide problem.

TYPES, PROVISIONS, AND OBJECTIVES OF BASE PLANS

Although the underlying philosophy and objectives differ, base-excess seasonal pricing plans involve some of the same principles and logic as Class I base plans. Under base-excess seasonal plans, bases are established each year and entry to the market is relatively open. The base-forming period is during the short-production months; the base-paying period is generally in the flush months. Blend pricing occurs in months other than during the base-paying period. 3/ Under these plans, the producer who provides a certain quantity of milk in the fall months when supplies are short establishes a claim or "market right" to the fluid, higher priced (Class I) portion of the market during months when a surplus exists. (Fluid milk used for Class I purposes is higher priced than that used in manufacturing.)

3/ Four Federal order markets--Southern Michigan, Georgia, Washington-Oregon, and Middle Atlantic--had seasonal base-excess plans with 12-month base-paying periods as of January 1972.

In contrast, Class I base plans (relatively closed or semiclosed) involve "market rights" of producers for a longer period of time. Concern centers more on the annual level of milk deliveries than on seasonality of production within the year. These plans operate on the principle that a producer who supplies a market during some designated period of time--say a specific year or period of years--establishes a claim or "market right" to the higher priced fluid market during subsequent years.

In addition, some local markets with a history of relatively short supplies are interested in the welfare of a group of local producers supplying these markets. In these instances, Class I base plans may be used as a means of increasing local milk supplies and as barriers to entry of outside producers. Thus, supply management objectives of Class I base plans can vary from supply enhancement through supply stability to supply control. Depending on provisions of the plans, seasonality within the year may or may not be a concern. Two further dimensions of both types of base plans are the impact on an established group of producers associated with a designated market and the effect on outside producers desiring access to the market.

Base plans may be designed to accomplish specific objectives by altering the mix of the following provisions:

- 1.--Length of the production period and months of the year used to determine the base.
- 2.--Time interval between base revisions, which may range from yearly or multiyearly plans to practically no revisions.
- 3.--How the base is revised. New bases may be reassigned in accordance with changes in a historical record of milk deliveries which would result in yearly increases or decreases in a producer's base. Or bases may be held constant and baseholders may be allotted any increases or decreases in fluid milk sales of a market by marketing quotas derived from actual sales of milk. 4/
- 4.--Restrictions on base transfers: whether they can be transferred, who they can be transferred to, and whether they can take on value. These restrictive provisions may allow transfer of bases alone or require that cows or farm or both accompany bases.
- 5.--Entry of new producers on the market may be allowed or virtually excluded by restrictions. Ease of entry is related to the difficulty

4/ Base plans under Federal orders operate under a uniform base price and uniform excess-price system rather than a quota system. Gross pool value of producer milk is calculated (pounds of each class of milk times respective class prices). Value of excess milk (pounds of excess milk times excess price) is calculated and subtracted from gross value to give value of base milk. Total value of base milk divided by the hundredweights of base milk gives the uniform price of base milk. Thus, for a given gross value of base milk in a pool, uniform base price paid producers will decrease if more base pounds are allotted; if fewer base pounds are allotted, uniform base price increases.

or cost of obtaining a base. A base may be built up (depending on provisions in 1, 2, and 3); it may be transferred from existing producers (depending on provisions in 4); or it may be obtained from both sources.

6.--Level of price for excess milk: may be varied and can be dropped below marginal cost for efficient producers.

There are almost as many possible combinations of these provisions as there are base plans. Potential effectiveness of any base plan in accomplishing its objectives may be evaluated by examining both its provisions and also administrative and policy decisions that affect the fluid milk production and marketing system.

DEVELOPMENT OF FEDERAL ORDER AND COOPERATIVE BASE PLANS

Seasonal Plans Under Federal Milk Orders

Three principal types of seasonal pricing plans have been used to reduce seasonality of milk production: base-excess plans, seasonal incentive payment plans (sometimes called the Louisville plan), and seasonal variation in class prices. 5/

With fluid milk supplies increasing above Class I sales plus an adequate reserve--in short-production months, too--some markets are deemphasizing seasonal pricing. Decision makers in markets with adequate manufacturing facilities may also reason that it would be more advantageous and economical to manufacture surplus milk during flush-production months than to try to manage production and marketings at the farm level. 6/

The percentage of Federal order markets having base-excess seasonal pricing plans has declined in recent years. About half the markets had base-excess plans in the midfifties (table 1). By January 1971, only 21 percent--13 of the 62 Federal order markets--had base-excess seasonal pricing plans (fig. 1). During this same year, 14 of the 62 markets (23 percent) had the Louisville plan and 35 markets (56 percent) did not have seasonal pricing plans. The Louisville plan became more popular over the years than the base-excess plan.

5/ Since 1968, seasonal variation in class prices exists only to the extent that the Wisconsin-Minnesota basic formula price varies seasonally. Base-excess plans also incorporate various degrees and forms of seasonal variation in class prices.

6/ This philosophy considers the annual level of net returns to producers after accounting for differences in milk production costs in short- and flush-production months, and differences in transportation, manufacturing, and storage costs under alternative seasonal patterns of delivery.

Table 1.--Federal order markets under various seasonal pricing plans, 1956-71 1/

Year	Type of seasonal plan					Percent 3/	
	Base-excess	Louisville	Variable prices	Total 2/	Base-excess	Louisville	Variable Prices
1956	31	8	25	64	48	13	39
1957	32	8	25	65	49	12	39
1958	35	9	24	68	52	13	35
1959	35	9	29	73	48	12	40
1960	36	11	29	76	47	15	38
1961	34	12	31	77	44	16	40
1962	33	12	35	80	41	15	44
1963	36	12	34	82	44	15	41
1964	30	13	35	78	38	17	45
1965	27	15	32	74	37	20	43
1966	27	15	32	74	37	20	43
1967	24	18	31	73	33	25	42
1968	21	21	4/32	74	29	28	4/43
1969	17	18	4/31	66	26	27	4/47
1970	14	17	4/37	68	21	25	4/54
1971	5/13	14	4/35	62	21	23	4/56

1/ As of January.

2/ Decline in number of markets from 1964 through 1969 reflects consolidation. Percentage of total fluid-grade milk sold to plants and dealers under Federal orders trended upward throughout 1956-71.

3/ Sum of the three percentages equals 100.

(Volume of milk pooled under Federal order markets with base-excess seasonal pricing plans represented 40 percent of total Federal order milk in 1963, and 22 percent in 1970.)

4/ There have been no seasonal variations in Class I pricing provisions since 1968.

5/ Includes Puget Sound, Wash., Class I base plan market.

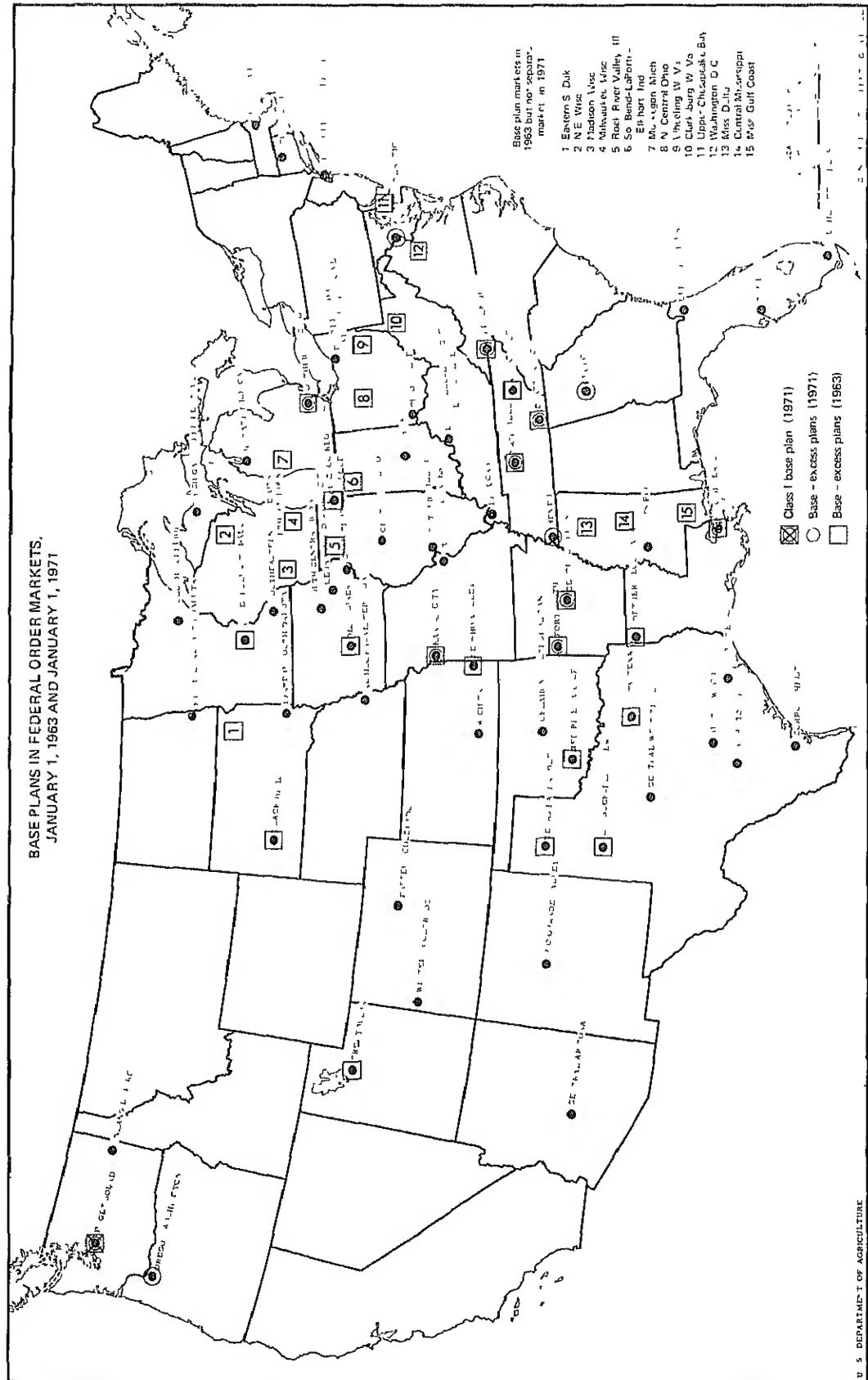


Figure 1

Cooperative Base Plans Through 1940

Base or quota plans developed by farmers' cooperatives for local fluid milk markets antedate both Federal orders and State milk control laws which came into being in the early 1930's (9). Base plans were being used in more and more markets during the 1920's and 1930's. Out of 162 markets for which information was available, bases or quotas were being used in 101 as of January 1940. In 31 other milk markets, bases or quotas were not being used but had been employed at some previous time. Welden and Herrmann concluded that expansion in use of base plans was undoubtedly stimulated by cooperatives' desires during the depression to protect their fluid milk price levels and offset effects of declining sales and increasing milk receipts. Use of base plans was influenced also by activities of State and Federal milk control agencies. Of the 30 plans started in these markets during 1933-35, at least 16 began under some form of government control--11 under Federal and five under State supervision.

Quotas were also abandoned in 35 of these markets during 1932-36 for numerous reasons:

"Base plans became a point of attack for minority groups. It was impossible to grant increases in bases and still to maintain a reasonable relationship between total bases and fluid sales because fluid sales were declining. Some efforts to change the plans so that they would hold down total receipts, as well as encourage more uniform receipts, made the plans unduly complicated. . . . Finally, high bases came to mean less and bases also became frozen. Low-base producers withdrew from the pool; new producers coming on the market avoided the association and its low base for new producers. All these developments caused opposition to bases among members and leaders of many cooperatives. . . . (9, pp. 3-7).

Open Versus Closed Cooperative Base Plans

The 1940 Welden and Herrmann survey found almost as many kinds of base or quota plans as there were markets using them. Also, in individual markets, the plan was changed in some important respect nearly every year. About half the milk cooperatives were using an open-base plan. Entirely new bases were assigned at least once each year in 41 cases out of a total 83. Less than half as many, 17 out of 83, were using closed-base plans, carrying the same bases over from year to year with only minor adjustments in some instances. The remaining 25 cases did not establish entirely new bases for all producers each year, but provided major adjustments each year for some producers.

Because of the local market concept of the 1930's and 1940's, it was practically impossible to cover all special situations with a reasonable number of rules. Adjustments in bases and transfers among producers constituted a difficult set of administrative problems. Opinion during the period was sharply divided as to whether base plans could successfully limit changes in

total milk production. The plans apparently were more successful in creating distribution of sales returns which the cooperatives were seeking and in adjusting seasonal milk receipts than in controlling total market receipts over a longer term.

Cooperative Base Plans in the 1960's and 1970's

In 1963, 19 Federal order markets without base-excess plans incorporated in the orders reported that cooperative associations in eight markets were operating 15 independent base plans. Sixteen markets that did have base-excess plans incorporated in the orders reported that nine cooperative plans in seven markets contained provisions which differed significantly from those contained in the applicable order.

The proportion of producers in individual markets directly affected by these cooperatives' base plans ranged from a rather small percentage in two markets to 100 percent in two markets. Greater diversity existed among cooperative base plans in markets with individual handler pools than in markets with marketwide pools. But two associations in one marketwide pool used plans at variance with each other; three associations in another marketwide pool operated plans both at variance with each other and with the order provisions; and an association in a third marketwide pool was reported to operate at least two pools (but not two distinct base plans) among its members on the same market. Implications are rather far-reaching when one considers the many ways in which cooperative base plans may be complementary to or at odds with Federal order plans.

In 1966, cooperatives in at least seven Federal order markets operated closed-base pooling systems. ^{7/} Provisions for these plans were not included in the Federal orders, but were developed and administered by the cooperatives as supply management devices and alternative means of distributing proceeds among member producers.

A cursory survey was made to determine the extent of cooperative closed-base plans in effect in Federal order markets in 1970 and the proportion of milk in each market that was marketed under such plans. Nearly half the Federal order markets operated with over 50 percent of their milk delivered under cooperative closed-base plans. These markets were concentrated primarily in the Southeast, Southwest, and Mountain States. This spread in the use of cooperative closed-base plans, compared with conditions in the mid-1960's, partly results from the recent merger movement among dairy cooperatives. When cooperatives consolidated, if one or more of the constituent cooperatives had a closed-base plan, some form of this type of plan was usually adopted by the consolidated organization.

^{7/} Farmer Cooperative Service. Unpublished study, U.S. Department of Agriculture.

Specific provision for cooperatives to reblend proceeds of milk sales is found in the Agricultural Marketing Agreement Act of 1937 (7 U.S.C. 608c (F)):

"Nothing contained in this subsection is intended or shall be construed to prevent a cooperative marketing association qualified under the provisions of section 291 and 292 of this title, engaged in making collective sales or marketing of milk or its products for the producers thereof, from blending the net proceeds of all of its sales in all markets in all use classifications, and making distribution thereof to its producers in accordance with the contract between the association and its producers: Provided, that it shall not sell milk or its products to any handler for use or consumption in any market at prices less than the prices fixed pursuant to paragraph (A) of this subsection for such milk."

This provision gives cooperatives representing producers in Federal order markets considerable latitude for reblanding and redistributing returns from milk sales regardless of their source or the type of pricing and pooling system provided under the Federal order system. Thus, cooperatives have a broad spectrum of alternatives and freedom to initiate their own supply management programs. Now that Class I base plans can be incorporated in Federal orders, cooperatives may have a more extensive set of supply management alternatives.

Provisions of the 1970 act apparently allow relatively flexible characteristics for Class I base plans that can be incorporated into Federal orders. The question arises as to whether such plans operated strictly according to order provisions can control milk supplies effectively. If effective supply control provisions cannot be written into Federal orders--given the intent of the Congress and provisions of the Agricultural Marketing Agreement Act--alternatives open to cooperatives may be:

- 1.--Continuing to use the blend pricing system currently provided by most Federal orders;
- 2.--Proposing the most restrictive Class I base plans possible under the Federal order system and living with the results;
- 3.--Operating their own supply management systems without having Class I base plans under the Federal order system;
- 4.--Superimposing their own supply management systems on base plans incorporated in Federal orders;
- 5.--Seeking revised Class I base plan legislation; and
- 6.--Seeking new legislation specifically authorizing a national quota program.

FEDERAL ORDER CLASS I BASE PLANS UNDER THE FOOD AND AGRICULTURE ACT
OF 1965

Development and Provisions

For the first time in the history of Federal milk orders, Title I of the Food and Agriculture Act of 1965 authorized Class I base plans, amending the Agricultural Marketing Agreement Act of 1937--the authority under which Federal milk orders are issued. The primary purpose of this title was to reduce milk production that was exceeding the markets' needs.

It was held that Class I base plans would control milk production for two reasons. First, the established blend price system was thought to encourage a price-production spiral. Second, since they wanted increased volume to achieve operating efficiency, processors continually pressured dairy farmers to increase production. Those supporting the Class I base plan believed it would eliminate these pressures because, once acquiring a base, the producer was assured of the same relative position in the market, regardless of production increases by a neighbor.

Class I base plan provisions included the following:

- 1.--Bases were assigned to producers according to deliveries in the marketing area during a prior representative period which need not be limited to 1 year.
- 2.--Producers would receive a higher fluid milk price on milk marketed under the base rather than a blend price on all production. Milk in excess of allotted base would receive the manufacturing milk price.
- 3.--Transfer of Class I bases among producers would be permitted under certain conditions.
- 4.--New producers (producers from another market or those who had not produced milk before) and hardship cases would be the first to share in any increase in Class I base resulting from increased consumption of fluid products or from forfeiture or surrender of previously established Class I bases. Any bases assigned to these new producers were for pricing purposes only.
- 5.--Provisions would become effective in each order area only if approved by two-thirds of the producers voting individually in a referendum. Bloc voting by cooperatives for their members was prohibited. The plan could be voted out by a simple majority.
- 6.--If Class I base plan provisions were disapproved or terminated, remaining provisions of the order would remain in effect.
- 7.--Provisions of Title I were to be effective through December 31, 1969.

Hearing on Class I Base Plan for the Puget Sound, Wash., Order Market

Even prior to authorization of Class I base plans for Federal orders, Puget Sound, Wash., producer cooperatives had begun working on Class I base plan provisions for their market. The Puget Sound Base Plan Committee was subsequently established and actively lobbied for enabling legislation which would authorize Class I base plans under Federal orders.

In the public hearing, this committee stressed the desirability of separating payment for milk according to market needs so that producers would not need to expand production to maintain their share of the fluid market. The committee believed that if a producer were assured the higher price for base milk, he could choose to maintain or adjust production, knowing he would receive the lower manufacturing price for all milk above base.

USDA determined that the surplus situation in this market was the type which the Congress believed could be remedied by a Class I base plan. Following the hearing and referendum, the first Class I base plan in any Federal order became effective in the Puget Sound market on September 1, 1967.

Hearing on Class I Base Plan for the Southeastern Florida Order Market

The second Federal order market to hold a hearing on adoption of a Class I base plan under provisions of Title I was Southeastern Florida. The decision denied a Class I base plan because no surplus situation existed in that market. Thus, USDA's interpretation was confirmed as to the Congress' intent concerning market supply-demand conditions warranting Class I base plans. Therefore, the likelihood of permitting these plans under the 1965 Act in markets of relatively short supplies--markets most probably interested in these plans--appeared to be foreclosed.

Representatives of some other Federal order markets exhibited interest in Class I base plans at the Southeastern Florida hearing. However, this interest lessened after the hearing but the decline may also have been related to other factors. The termination date of the Class I base plan provisions authorized under the 1965 act was near; cooperative leaders in Federal order markets may have been waiting to see what kind of plan would evolve under new legislation. In addition, excess milk supplies were declining, apparently dampening overall interest in Class I base plans.

FEDERAL ORDER CLASS I BASE PLANS UNDER THE AGRICULTURAL ACT OF 1970

In passing the legislation continuing authorization of Class I base plans, the Congress provided a December 31, 1973, expiration date, which meant that Class I base plans issued prior to December 31, 1973, could be extended beyond that date, but not past December 31, 1976. Limiting the Class I base plan to 3 years allows additional experience with the plan and automatically brings it up for review. Higher capitalization of bases would probably have occurred if the plan had been made permanent.

Three principal differences existed between the Class I base plan provisions in the Food and Agriculture Act of 1965 and in the Agricultural Act of 1970. First, once the base had been established in the 1965 act, there were no provisions for readjusting it. The 1970 act provided a base period of 1 to 3 years, which would be updated automatically each year. Supporters of this change believed new producers could enter more easily, established producers could grow with the market, and monetary value of the bases would be depressed.

Second, the 1965 act confined participation of new producers in the market's Class I sales to any increases in such sales or to purchase of existing bases. The 1970 act eased these restrictions and allowed new producers to obtain permanent bases. During debate, the intent to assure access to the market was specifically emphasized.

Third, the Class I base plan provisions in the 1965 act were interpreted to be applicable only to surplus markets. As pointed out during congressional debate, Title II of the 1970 act intends that Class I base plans be an option for all Federal order markets.

During discussion of Title II, those in favor of revising the Class I base plan contended that existing provisions granted a fluid market monopoly to local producers and prevented an intermarket "free flow" of milk. Furthermore, the "static" base in the 1965 act did not accommodate adjustment of bases to rapidly changing supply and demand conditions in fluid milk markets.

These points represented a major shift in emphasis from 1965 to 1970. In 1965, supply control was the prominent objective of the Federal order Class I base plan. By 1970, income distribution and market access had apparently become the primary objectives.

Revised Class I Base Plan for Puget Sound, Wash., Federal Milk Order

The first Federal order hearing on Class I base plans supported by provisions of the Agricultural Act of 1970 was held at Seattle, Wash., February 9-11, 1971. USDA findings and conclusions indicated that producers supplying plants regulated by the Puget Sound order should have an opportunity to market their milk under a Class I base plan issued in conformity with the Agricultural Act of 1970. Authority for the then existing Puget Sound Class I base plan was due to expire on December 31, 1971. Since the order contained no alternative provisions for distributing returns to producers, some means of distribution had to be determined.

USDA believed that 1965 legislative authority did not provide the flexibility necessary to meet changing marketing conditions. The only means open to a new producer to acquire base or to an established producer to increase his base under the old authority, was by purchasing base from other producers:

"Under the Agricultural Act of 1970, greater flexibility is permitted in a Class I base plan. The new plan is designed to adapt to changing supply-demand conditions. Under it new producers

coming on the market will be able to earn, over a reasonable period of time, bases comparable to those of other producers. Similarly, it will provide a means whereby any producer desiring to increase his production and thus earn additional base may do so" (7).

Class I Base Plan for the Georgia Order Market

A public hearing was held at East Point, Ga., April 27-29, 1971, on proposed amendments to the Georgia Federal order. Adoption of a Class I base plan was one of the three material issues considered at the hearing. USDA concluded that producers supplying plants regulated by the Georgia Federal order should have an opportunity to market their milk under a Class I base plan. At the time of the hearing, producers under the Georgia order were being paid under terms of a 12-month seasonal base-excess plan.

USDA's decision indicated:

"The purpose of the Class I base plan is to provide a method for producers regulated by the Georgia order individually to adjust production to meet the Class I needs of the market. Cooperative organizations representing a majority of the producers on the Georgia market presented all the testimony in favor of the proposed base plan. However, a proprietary handler representative suggested modifications regarding certain aspects of the proposal

Under the plan proposed herein producer bases would be adjusted annually to reflect changing supply-sales conditions. While the plan provides a means whereby new producers may earn bases and established producers may increase their bases, it also provides that baseholding producers who reduce their marketings will not be adversely affected. This would be accomplished by providing that a producer's production history would not be reduced as long as he markets a volume of milk at least equal to his Class I base" (8, p. 23223).

Other provisions generally followed the reasoning outlined for the Puget Sound Class I base plan. At least two-thirds of the producers under the order approved the plan in a referendum and it became effective March 1, 1972.

The Georgia decision is important from two standpoints: (1) Markets relatively short of milk are not prohibited on that basis from having a Class I base plan, and (2) A general indication is given of the Class I base plan provisions that can be written in orders under the authority of the 1970 Act.

Other Markets Interested in Class I Base Plans

USDA is studying proposals for Class I base plans in the Inland Empire and Nebraska-Western Iowa Federal orders. Public hearings were scheduled for

March 1972. In addition, a number of markets in Texas, Illinois, and Indiana have recently expressed interest in Class I base plans. Given the Georgia decision, interested parties in a number of markets will probably petition for hearings on Class I base plans.

Market Characteristics Conducive to Class I Base Plans
in Federal Order Markets

Several market characteristics apparently condition producer attitudes toward Class I base plans in Federal order markets:

- 1.--Prior history of production under State, cooperative, or seasonal base-excess plans or all three--a general base philosophy. This experience acquaints producers with base plan principles and provisions and may ease the transition to Class I base plans. 8/
- 2.--Especially if they have sufficient manufacturing facilities for handling surplus milk, cooperatives in a market may stress the practice of "guaranteeing a market" for any and all milk produced by their members. However, if a market has inadequate manufacturing facilities, handlers and cooperatives may be more inclined to encourage producers to tailor their milk production to fluid needs of the market.
- 3.--Discrepancies between cooperative member and nonmember pooling and pricing systems may result in cooperatives favoring Class I base plans under the Federal order system as a method of standardizing pricing within or among markets or both.
- 4.--Isolated markets may have more interest in Class I base plans than those less isolated.
- 5.--Supply-demand conditions of a market. Markets with excess milk supplies are often interested in access to other markets instead of wanting to limit their own milk supplies. On the other hand, markets with a favorable supply-demand balance may be interested in preventing entry from other markets which would lower prices.

Many of these characteristics existed in markets which have actively sought Class I base plans--Puget Sound, Wash., Southeastern Florida, and Georgia:

8/ Alternatively, if they are satisfied with the results of base-excess seasonal plans, producers may have less interest in Class I base plans, especially in markets that have adopted 12-month payout base plans.

"The Puget Sound area is unique, as compared to most Federal order markets, because the movement of milk is deterred by Canada on the north, mountains on the east, and an ocean on the west.

The Puget Sound area has had a long history with base plans. Milk marketing and base are almost synonymous to Puget Sound dairymen. Company base programs preceded the base-excess plans and a base and excess plan operated under the Federal milk order prior to the Class I base plan.

Several Puget Sound dairymen moved from California to the State of Washington bringing a base concept. Interest was also sparked by the Vancouver, British Columbia, plan that went into effect in March, 1962" (1, p. 5).

Returns to Puget Sound, Wash., producers had been distributed through a seasonal base-excess plan under the Federal order since its initiation in 1951. Under the plan, a new base was established each year for each producer by averaging his deliveries during the 5 short-production months of August through December. During the following 12 months, beginning with February, each producer was paid a base price for deliveries not exceeding his established base and a lower "excess" price for deliveries exceeding his base.

Base milk deliveries in the Puget Sound market under this plan increased almost five times faster than Class I use from 1952 to 1965. Base milk deliveries rose 121 percent while Class I use went up only 26 percent. The result was a downward trend in the proportion of base milk used in Class I-- from 87 percent in 1952 to 49 percent in 1965.

The proportion of increased milk production attributable to the seasonal base-excess pricing plan is difficult to determine. Many other factors undoubtedly were involved. Changes in alternative farm and off-farm opportunities over time and changes or anticipated changes in milk prices may have been influential. Some analysts point to premiums negotiated by producer cooperatives above Federal order prices as contributing to surplus milk production. When comparing operation of a Class I base plan in Vancouver, B. C., with the Washington State situation where such a plan was not in effect, Glenn Loring found ". . . Puget Sound production has continued to climb, up again 3.3 percent in June 1965 over the previous June, while the amount of milk used for Class I fluid products dropped by 2 percent But not all producers blame the Federal order for all the surplus milk in the Puget Sound market. Some blame the co-op that has negotiated as much as a 74 - cent premium over the Federal order price for Class I milk" (5). Whatever the reason for the increase in excess supplies in Puget Sound, pressure existed for the introduction of some supply control mechanism.

The Southeastern Florida market also has a history of various types of Class I base plans operated by individual handlers, the State, or producer cooperatives. The following passage illustrates the dilemma presented in a number of Federal order markets where cooperatives operate various types of base plans outside the Federal order framework:

"Since 1961, IDFA has operated a type of Class I base plan outside the order to encourage members to adjust their production to the needs of the market. The institution of their plan followed the removal from the order of a seasonal base-excess plan, which was considered to have stimulated excessive production because of a race for base by producers. IDFA claims that its plan places members at an economic disadvantage compared to other producers on the market, since the plan applies only to its members. It points out that the other producers, being outside the plan receive for all their milk the order uniform price, which in 1968 averaged \$6.96. When these producers increase their production, they receive the uniform price on the additional milk also. Its members, IDFA indicates, do not. Although IDFA receives for its members the order uniform price for all their milk, these returns are redistributed to the members through their Class I base plan. Members receive approximately the Class I price for base milk and approximately the Class III price for milk exceeding their base, IDFA stated. Under the order, Class I and Class III prices averaged \$7.31 and \$4.32, respectively, in 1968. IDFA stresses that any additional production by a member already producing his base returns to him only the lower price. It is this difference--approximately \$2.64 in 1968--in returns to members and to other producers for additional milk production IDFA argues, that results in the economic disadvantage to members "(6, pp. 11213-14).

The quotation indicates that unless all producers belong to the cooperative in these situations, pressures would probably develop to have a Class I base plan under the Federal order so that all producers would be forced to comply with provisions of the plan.

Producers in the Georgia Federal order market had a background of marketing milk under State-administered base plans prior to use of a seasonal base-excess plan under the Federal order system. The Federal order base-excess plan had a 12-month base payout feature. Bases were transferable and did take on monetary value. Milk supplies were increasing under this plan; proponents of the Class I base plan believed that annual milk deliveries could be better managed under the proposed plan.

Historically, the Georgia fluid milk market had relatively short supplies. Principal manufacturing outlets for reserve supplies were located outside the State.

ANALYSIS OF BASE PLANS

Supply Stimulating Features of Federal Order Base-Excess Plans

Under base-excess seasonal plans with unlimited entry to the market and new bases established by producers during a designated base-building period each year, the individual farmer is said to believe it is necessary to increase his base to gain or retain his share of the higher priced fluid milk market.

As a test of this hypothesis, total producer milk deliveries for 1957-70 in eight Federal order markets with base-excess plans during the period were compared both with these same data for a "core" set (explained later) of 33 Federal order markets without base-excess plans and also with total sales of milk to U.S. plants and dealers (fig. 2). Total producer milk in 1970 for the base-excess markets as a group was up 48.7 percent from the 1957-59 base years, compared with a 29.3-percent increase in the 33 core markets and a 1.1-percent rise for total milk sold to U.S. plants and dealers.

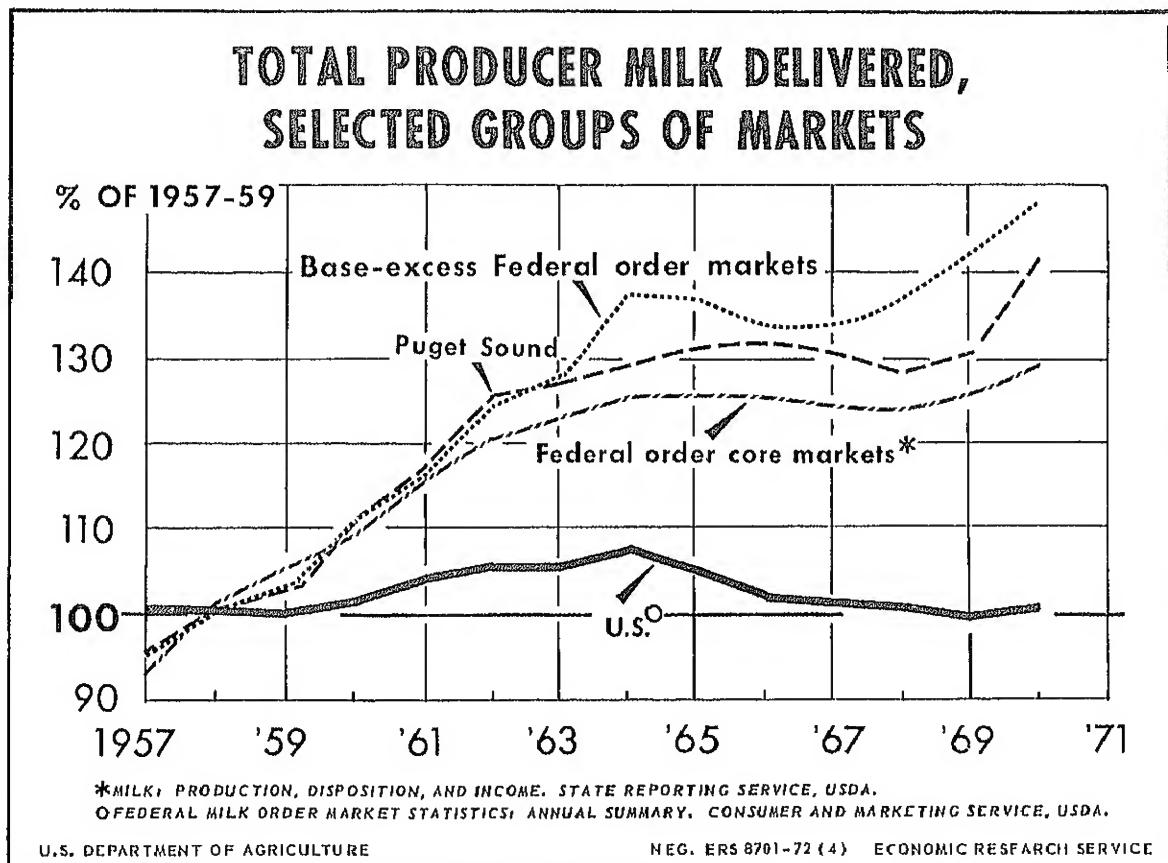


Figure 2

In a dynamic fluid milk marketing system, it is virtually impossible to select groups of markets where "all other things" except the variable considered would remain constant throughout the period being studied. For comparison, data on total producer milk, producer milk allocated to Class I use, and surplus milk were computed for the 33 Federal order markets. To be included in this core set, each market--along with those markets which merged to form it--had to have been regulated since January 1957. In addition, only markets with reasonably comparable or adjustable data were used. The eight "base-excess" markets and Puget Sound were not included, so the core set would be free of supply influencing effects of base plans.

Comparing the eight base-excess markets with the core set tended to substantiate the hypothesis that supply stimulating influences exist within base-excess markets. However, interacting forces within certain markets may have had more influence on production response than did effects of base-excess pricing plans.

Effects of Class I Base Plan on Puget Sound, Wash., Market

Excess milk supplies in the Puget Sound market increased steadily because milk production rose more rapidly than Class I use. Between 1957 and 1965, Class I use went up 4.3 percent, while total milk deliveries grew 37.6 percent (fig. 3). As a result, Class I utilization fell 14 percentage points in Puget Sound, compared with the Federal order core markets for this same period.

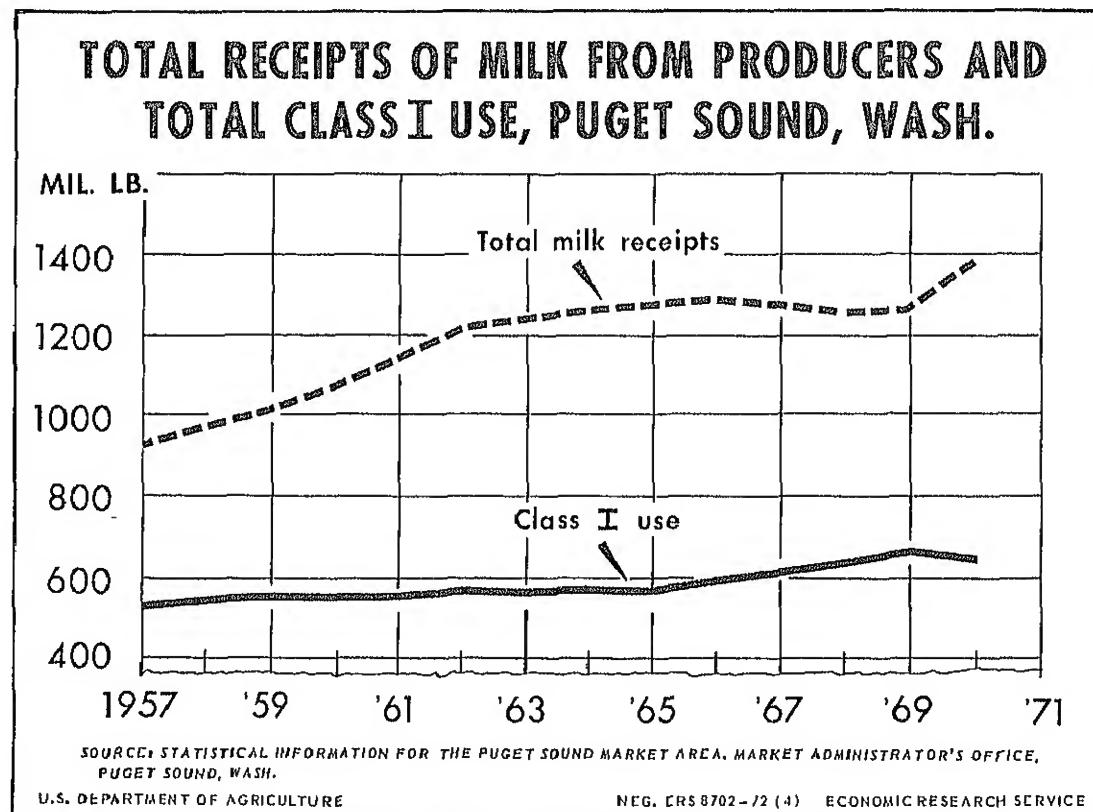


Figure 3

Following the inception of the Class I base plan in September 1967, producer deliveries in Puget Sound increased more rapidly than they did in the core markets. From September 1967 to December 1970, the core group rose 5.6 percent, and Puget Sound grew 13.1 percent (fig. 4). The trend of rising milk deliveries in Puget Sound continued with a seasonal high in May 1971, 6.5 percent over the previous high in May 1970.

In addition, Class I use in Puget Sound increased 3.7 percent over the previous year in 1968 and 4.9 percent in 1969, but declined 2.5 percent in 1970 (fig. 3). Also in 1970, as a result of increasing producer milk deliveries and declining Class I use, the Class I utilization percentage in Puget Sound declined 5 points (fig. 4). Apparently, the Puget Sound Class I base plan has not alleviated excess supply problems.

Total milk deliveries depend on two factors: number of producers and average daily deliveries per producer. The number of producers in Puget has been steadily declining since 1957 (fig. 5). After the Class I plan went into effect, this drop continued through 1970. However, in 1970, the rate of producer exit in Puget Sound slowed down so that by early 1971, producer numbers were remaining fairly constant.

Size of dairy farms, indicated by average daily delivery per producer, has steadily increased in Puget Sound since 1967 (fig. 5). This trend, which has occurred since the Class I base plan went into effect, has not changed significantly from that taking place before initiation of the plan.

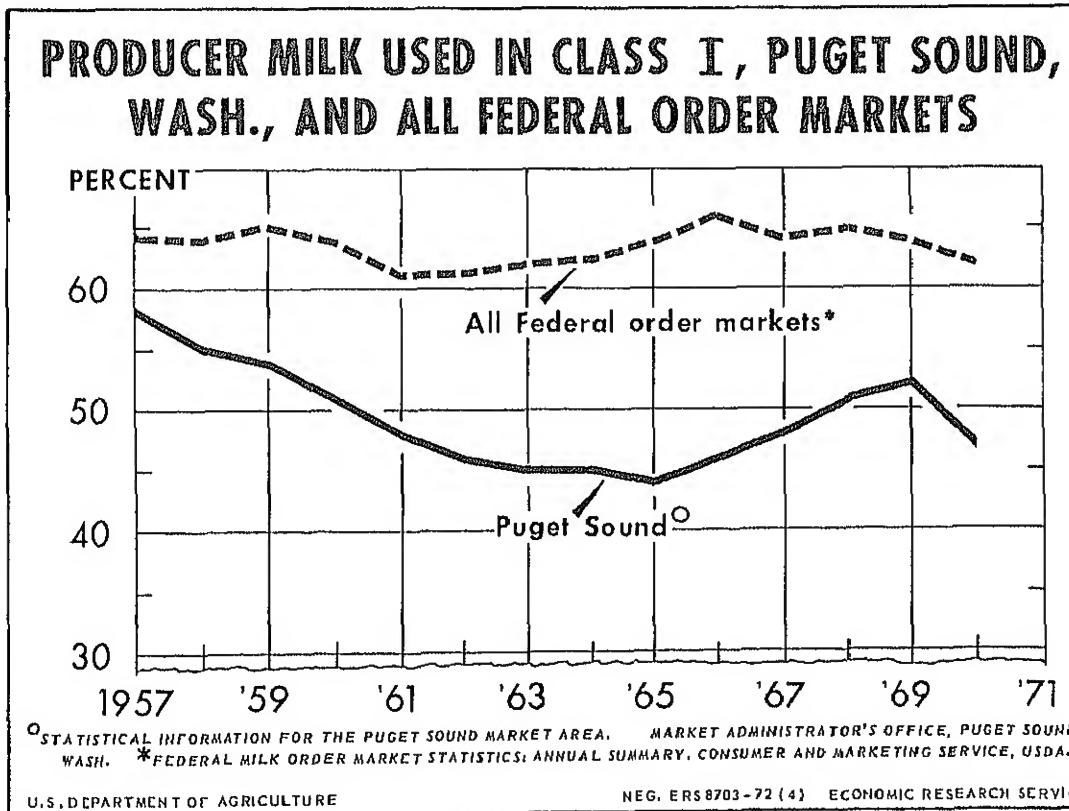


Figure 4

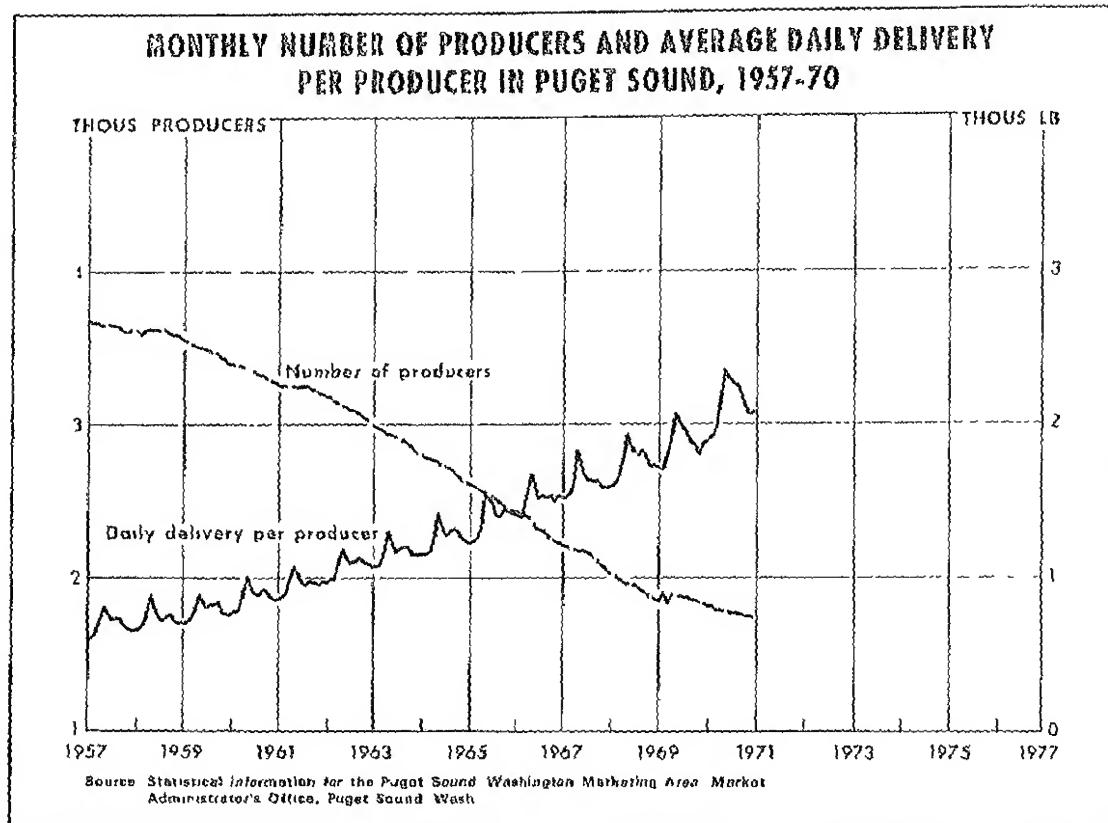


Figure 5

Since the Class I base plan became effective in September 1967, 2,192 producers have been issued Class I bases averaging 924 pounds each. By December 1970, 30 percent of these producers had gone off the market, 10 percent had sold their base but were continuing to produce, 32 percent had the same or less base, and 29 percent had larger base (table 2). Average size of the original base issued to producers who went off the market was 820 pounds. The average was 921 pounds for those producing without base, 748 pounds for those with the same base, and 1,219 pounds for those with a larger base.

Of producers with an original base under 1,000 pounds, 69 percent were producing with the same or less base or had gone off the market by December 1970. In comparison, 43 percent of producers with an original base of 1,000 pounds or more had either the same or less base or had gone off the market by December 1970.

When the plan went into effect in September 1967, 57 producers had no base. By June 1968, the number had increased to 362, with a net addition of only 19 new producers on the market. The remaining 286 were producers with a Class I base who had transferred it to other producers. Referring to this trend, the Puget Sound study by the American Farm Bureau Federation stated:

"The base plan provision that new producers and hardship cases have first priority to new base is the most widely stated reason for dairymen transferring their bases and becoming new producers. As long as Class I

Table 2.--Status of producers issued Class I bases, Puget Sound, Wash. market, December 1970

Size of original base (lbs.)	Total		Producers off the market		Without base		With original base 1/		Producers	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Under 500	664	282	42	50	8	258	39	74	11	
500-999	888	223	25	88	10	304	34	273	31	
1,000-1,499	324	68	21	39	12	75	23	142	44	
1,500-1,999	145	30	21	16	11	35	24	64	44	
2,000-2,499	76	15	20	9	12	11	14	41	54	
2,500-2,999	34	11	32	1	3	8	24	14	41	
3,000-3,999	37	9	24	2	11	2	5	22	60	
4,000-4,999	12	4	34	1	8	1	8	6	50	
5,000 and over	12	5	42	0	0	1	8	6	50	
Total	2,192	647	30	208	9	695	32	642	29	

1/ Includes those holding same base issued to previous farm operator and those holding less than issued base.

Source: Market Service Information for the Puget Sound, Washington Marketing Area, Vol. 21, No. 6, June 1971.

sales continue upward, the incentive is attractive for some dairymen to sell their base and to sign up as new producers knowing they will receive the base price for a significant volume of their deliveries" (I, p. 30).

Following the early months of the program, the number of producers without bases who had been issued a Class I base began to decline.

The percentage of new producer milk receiving the base price under Class I base plan provisions of the 1965 act depended on the amount of base milk available for allocation to these new producers and the total amount of milk they delivered during the month. Base assignment was available from any increase in Class I usage plus underdeliveries of potential base milk by producers with Class I bases. The percentage of milk from new producers receiving the base price is shown for all months of the Class I base plan under the 1965 act in table 3.

These percentages remained at high levels through 1969. However, beginning in 1970, the decline in the market's Class I sales resulted in a significantly lower share of the Class I market for new producers. The Puget Sound experience emphasizes that under the 1965 act, producers without bases would have fared relatively well only in Federal order markets with expanding Class I sales.

Supply Response Under Cooperative Base Plans

The number of cooperatives having closed-base plans was determined for those cooperatives who supplied milk to one or more Federal order markets in 1969. Milk supplied from each State by members of these cooperatives was estimated based on the proportion of each Federal order's milk supply originating from various States in 1969. A linear regression model was designed to determine whether there was any relationship between supply response of dairy farmers in individual States and the proportion of each State's milk supply under cooperative closed-base plans. The percentage change in milk marketed by farmers in each State in 1970 compared with 1965 was used as the dependent variable in the linear regression model and the percentage of each State's milk deliveries under cooperative closed-base plans was the independent variable. Regression results indicated a positive relationship between milk deliveries in 1970 compared with 1965--statistically significant at the 1-percent level--and larger proportions of milk under cooperative base plans. On the average, for each 1-percent increase in the proportion of a State's milk marketed under cooperative base plans in 1970, the State's marketed milk supply rose 0.2 percent.

Whether these plans were actually used as supply enhancement or supply control devices in the individual markets is beyond the scope of this report. It should be recognized, however, that closed-base plans can be used as supply-increasing as well as supply-depressing tools. Regression results do indicate that cooperative closed-base plans do not automatically curtail supply response.

Table 3.--Percentage of new producer milk receiving base price, Puget Sound, Wash., market
September 1967 - June 1971

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<u>Percent</u>												
1967												
1968	50	48	18	27	29	21	28	29	22	36	27	21
1969	50	46	24	30	21	16	26	20	21	26	22	20
1970	17	17	13	17	15	5	11	9	5	12	8	9
1971	17	17	7	8	3	4						

Source: Marketing Service Information for the Puget Sound, Washington marketing area, Oct., 1967 - July, 1971.

Other interacting forces could also be influencing supply response differentially among States and regions. Total U.S. milk deliveries decreased each year from 1965 through 1969, but increased in 1970. The level of milk deliveries in 28 States was lower in 1970 than in 1965, and 20 States showed increases in milk deliveries. These percentages ranged from a drop of 28 percent in Rhode Island to a gain of 27 percent in Georgia. Geographically, the decreases in milk deliveries in 1970 compared with 1965 were concentrated primarily in the Midwest and Northeast; increases in milk deliveries were concentrated primarily in the West and Southwest. State producer deliveries under cooperative plans were also compared with the percentage change in State producer deliveries from 1969 to 1970. This relationship remained positive, although much less significant, supporting the general relationships shown in the comparison of 1965-70 data.

ISSUES RELATED TO SUPPLY CONTROL POLICY

Base Plans as Supply Control Measures

Under a free market system, equilibrium price levels guide production, consumption, and income distribution. However, fluid milk markets operate under a classified pricing system established by Federal milk orders, State milk control laws, and dairy cooperatives. As discussed earlier, some cooperative leaders maintain that a level of prices which will assure an adequate but not excessive supply of milk for consumers will not provide enough return for dairy farmers. Under the resulting administered pricing system, effective pay prices to producers can be generated above the market-clearing level. If such prices are established at a level substantially above the competitive market-clearing level and maintained for an extended period of time, the excess resources that probably will go into dairy production will generate excess milk supplies. Base or quota plans are sometimes suggested as a means of meeting the problem of surplus milk. (Interest in base plans tends to rise when burdensome excess milk supplies are anticipated and an established price structure is in jeopardy.)

Base plans can range between the polar extremes of open base-excess seasonal plans and closed supply control plans. To control supplies effectively, base plans must fall toward the closed end of the continuum. Specific provisions must be included for limiting entry of new producers, limiting base revisions, and transferring bases.

Limited market experience indicated that Class I base plans under Federal orders, even with the relatively restrictive provisions of the 1965 act, could not curb production. This inability largely resulted because the surplus price could not be set below the marginal cost of production. Provisions of the 1970 act giving greater freedom of entry make effective supply control under Federal order Class I base plans more impossible.

Under current authority for Class I base plans under Federal orders provided in Title II of the 1970 act, supply control is apparently considered only as a secondary objective. Income distribution and market access are the overriding features. Under the 1970 act, Class I base plans are similar to base-excess seasonal plans in the following ways:

- 1.--Bases are updated each year and existing producers can increase their bases;
- 2.--Provisions are made for new producers to build base in a relatively short period of time;
- 3.--The act stipulates that base plan provisions should be written and administered so that bases will not take on unreasonable value; and
- 4.--The lower bound on setting excess price is the surplus or manufacturing milk price established under the order. This price may be higher than the marginal cost of production for some efficient producers.

As mentioned earlier, milk production increased more in Federal order markets with base-excess seasonal plans than in the core group of Federal order markets without such plans. In turn, experience under the relatively closed Class I base plan provisions of the Puget Sound, Wash., order showed that the plan did not curtail production, compared with results in the core markets. Thus, if there are supply stimulating effects in seasonal base-excess plans, Class I base plans under Federal orders will probably not be effective supply control measures and, in fact, may act to increase supplies.

If cooperatives can gain and maintain sufficient stature to overcome pressures from nonmembers and opposing groups--local or distant, current or potential--by operating their own closed-base plans, they probably can control production locally or regionally more effectively than can Federal order Class 1 base plans. Extensive full-supply contracts with handlers potentially can foreclose alternative fluid milk markets to nonmembers. Entry of new producers can be curtailed. Cooperatives do not have to be concerned about bases taking on an unreasonable value. Excess prices can be set at extremely low levels--thus making it unprofitable even for relatively efficient producers with low marginal costs of production to produce milk at the surplus price. Reblending privileges give cooperatives additional flexibility in distributing returns. However, the potential advantage nonmembers may gain outside the cooperative supply management program seemingly is a major deterrent to cooperatives' establishing their own supply control programs. The possibility of producer-handlers circumventing the program also may create problems.

A viable cooperative supply control program would require that a cooperative or federation of cooperatives acquire and maintain effective control of the fluid milk production and marketing system over an extensive market area. However, cooperatives must give constant attention to the legality of attempting to gain control over milk supplies. There are still unanswered legal questions under both the Capper-Volstead Act and the antitrust laws which bear directly on cooperative supply control programs. Given legal constraints both on methods of gaining control and on ways in which powers associated with this control are exercised, voluntary cooperative supply control programs may well have longrun limitations.

A positive relationship was found between the extent of cooperative base plans and the increase in milk deliveries, suggesting that supply control provisions discussed above have not been present (or not administered as such)

in all cooperative base plans in the past. In fact, the plans may have induced supplies. The various plans appear to differ sharply in their objectives, specific provisions, and philosophy underlying their administration.

Federal order Class I base plans operated in conjunction with cooperatives' own closed-base plans represent an alternative which may help overcome the problem of nonmembers. However, if stringent supply control measures are needed at any point in time, the potential comparative advantage afforded non-members relative to cooperative members may increase, causing dissension among producers and problems for cooperatives. These problems probably can be reduced if effective cooperative bargaining legislation receives Congressional approval.

Although a high percentage of total fluid-grade milk production in the United States is regulated by the Federal order system, this regulatory mechanism is losing much of its direct local market influence and becoming more of a system which undergirds dairy cooperative marketing activities. Examples of cooperative activities over which the order system has little or no control are: (1) full-supply contracts with proprietary handlers; (2) prices negotiated above announced minimum order prices; (3) movement and diversion of producer members among plants and markets; and (4) reblending of returns from milk sales among cooperative members. These same privileges historically have been open to cooperatives. However, when fluid milk markets were being operated locally, potential consequences and scope of cooperatives' impact on the structure, conduct, and performance of the milk marketing system were far more limited than under the structure of the industry which has been developing.

Federal orders and Federal order provisions are, and undoubtedly will continue to be, important in the fluid milk marketing system. The significant point, however, is that specific Federal order provisions do not have as direct an impact on the final results of the system as they once did. This limitation will also probably apply to Class I base plan provisions under Federal orders.

In light of these developments, cooperative leaders are seriously considering various supply management alternatives available to them. One question is to what extent supply management machinery will be operated outside the Federal order system and within the dairy cooperative system. If they conclude that Class I base plans would be advantageous under Federal orders, cooperatives will probably petition for these plans on a fairly broad cross-sectional basis rather than for isolated local markets. Another question is whether supply management on a broad basis would be in the best longrun interest of producers, the industry, and society. Competent analysts have developed different conclusions on this point in the past and a consensus of opinion would probably be difficult to obtain today.

Base or quota plans established and administered by State authority offer yet another supply management alternative. Seemingly, flexibility is part of State supply management programs, many of which are administered on an individual plant or local market basis. Objectives of individual plans vary considerably and the plans are concerned only with supply management problems within State boundaries. Retention of the more lucrative fluid milk market for a State's dairy farmers appears to be an overriding objective of these programs.

Generally, States that have attempted to manage supply have been in relatively short supply areas. In fact, some State agencies administer the plans so as to encourage additional production within the State. Supply enhancement may be more readily achieved than supply limitation.

When considering merits of supply management systems and their future potential, one should remember that experience with alternative types of base plans has generally been on a local market basis; that these local markets generally have been in either relatively short supply or isolated marketing areas; and that supply enhancement or stability have been the primary objectives. Therefore, it is difficult to determine what might happen in other markets that have different underlying structures or what the consequences would be if base plans were initiated regionally or nationally.

Given the rapidly changing structure of the fluid milk marketing system--especially the cooperative sector--regional and perhaps national supply management systems will probably be considered. If excess resources devoted to milk production constitute the longrun problem, equity considerations among producers throughout the Nation will probably come to the fore. Market access, income distribution, and supply management on a national level will probably be important issues.

Exploring ramifications of a national supply control system is beyond the scope of this report. However, if prices for both manufacturing- and fluid-grade milk are maintained above market clearing levels for an extended period of time, a national supply control program encompassing all fluid- and manufacturing-grade milk may be the only way to keep milk supplies in line with demand and maintain some semblance of equity among different groups of dairy farmers. The impact and consequence of alternative national milk supply control programs on dairy farmers, the industry, and society are far-reaching. Many of the above-listed issues that apply to Class I base plans would be among the expanded list of issues that would arise when considering a national milk supply control program.

Whether dairy farmers want to make production and marketing decisions within the framework of a price-oriented market system or a centralized co-ordinated system appears to be the primary issue at this time. Numerous examples illustrate that once an industry has chosen to abandon price as a means of coordinating supply and demand and begins to use a centrally coordinated system, an adjustment away from control is unlikely.

General Issues Related to Closed-Base Plans

If closed-base plans are chosen to control supply, some remaining considerations are: (1) market rights; (2) capitalization of base; (3) resource adjustment; (4) parity of income for small dairy farmers; (5) income distribution among producers; and (6) public welfare.

An issue that frequently arose in the Southeastern Florida Class I base plan hearing was that current Florida producers had an "inherent right" to the Class I fluid milk sales of local handiers. A proponent of the plan also testified that the cost of milk production in Florida was higher than anywhere

else in the United States, raising an important question for policymakers interested in longrun fluid milk marketing problems: Should producers located outside the immediate fluid milk production areas have access to major metropolitan milk markets if these more distant producers have a comparative advantage in supplying the market?

Whether the aggregate demand for fluid milk products and, in turn, fluid-grade milk is increasing, remaining stable, or declining, has important implications for dairy farmers. Since population changes have an important influence on fluid milk demand, major changes in either the level or location of the existing population call for adjustments in resources for fluid milk production and marketing.

Besides the effect of population changes on demand, two recent studies point out the impact of "people pressure" on costs of milk production in areas close to major metropolitan areas (2 and 4). If the cost of milk production is increasing faster in areas near major population centers than in more distant areas, this situation further complicates the problem of deciding whether nearby producers should be given a long-term market right to supply the needs of a market.

Besides the space or geographical aspect of the market right issue is the aspect of time of performance. Under the base plan concept, producers who supplied the fluid market during a designated time period are given a right or franchise to continue supplying the designated market in the future. Under other methods of restricting market entry, this projected future income stream is not immediately capitalized into a negotiable instrument. However, under closed-base plans where bases are transferable, an immediate monetary value is capitalized into the base. Value of a transferable base depends on:

- 1.--The difference between the base and excess prices;
- 2.--Degree to which a market is closed--length of time required or ease and cost of building new base;
- 3.--Rate of interest or return desired on investment in additional base;
- 4.--Length of time a given base plan is expected to be in effect; and
- 5.--Stability of overall plan and degree of uncertainty in the preceding four items.

A crucial tradeoff occurs between use of base plan provisions that can probably curtail market supplies and increased value of base. The more effective the provisions, the higher the probability that the base will take on excessive value. Therefore, an equity consideration arises as to whether a producer or generation of producers that by chance had been supplying a fluid milk market at some designated prior period in time should receive a franchise to continue supplying the market while others are restricted. In tightly closed base plan markets, the only alternative for producers who want to enter the market or expand production would be to purchase base from existing producers who own the franchise.

Franchises are given "after the fact." In other words, if a base plan went into effect January 1, 1973, bases would be calculated on deliveries in some prior period. Any producers wanting to discontinue supplying the market as of January 1973 or any time thereafter could sell their bases and reap the windfall. 9/ In fact, some producers may have expanded or remained in production in anticipation of coming under a closed-base plan.

If excess price were set below manufacturing-grade milk price and the market for base transfers were perfect, it would be equally profitable for dairy farmers to continue supplying the undifferentiated manufacturing milk market or to purchase base.

Capitalization of the base presents serious equity problems. Although this report does not explore all the ramifications, capitalization has important implications for farmers in:

- 1.--Different geographic regions;
- 2.--Situations with or without alternative farm enterprises;
- 3.--Different age categories;
- 4.--Different stages in firm growth;
- 5.--Different costs of production;
- 6.--Specialized versus diversified types of operations;
- 7.--Expanding, contracting, or stable fluid milk markets;
- 8.--Commercial versus family farm types of operations; and
- 9.--Entry or exit situations.

A major equity problem of milk pricing, as stated previously, is the allegation that payment to producers at the minimum price which will assure consumers an adequate milk supply does not yield all dairy farmers an equitable return. Numerous studies have shown that cost of milk production varies substantially among producers within States, with alternative enterprise combinations, with different scales of operation, in different geographic regions, and so on. Therefore, a "parity returns" problem will be present whether or not

9/ If a perfectly competitive market for bases existed, any additional revenue generated by the classified pricing system would be capitalized into the base and the windfall would revert back to current-generation producers. All advantages of supplying a differentiated fluid milk market would be foreclosed to new producers and producers wanting to expand. Since knowledge is imperfect, market value of bases generally would not exactly equal calculated discounted value. Appropriately written lease arrangements, however, could theoretically capture the full capitalized value for a time period that would extend to infinity. These types of arrangements are becoming more common and will probably appear more frequently in the future.

base or quota supply control measures are initiated. Considering these extensive variations, if an attempt is made to assure all dairy farmers parity of income, some producers will find dairying a lucrative enterprise indeed.

Apparently, a direct correlation exists between the extent to which base or quota plans are used as supply control measures and the number and degree of problems likely to arise as a result. The magnitude of these potential problems will be determined largely by the degree to which base or quota plans are used to help maintain a classified price structure or level of prices substantially above market clearing levels.

Some proponents of base plans argue that the issue is not supply control but supply management. They point out that the policy and equity issue is giving the individual producer the right to maintain his share of the fluid market regardless of the production and marketing response of other dairy farmers. Under closed-base plans, each producer could choose whether to produce additional milk at a lower excess price. The Congress has determined that the decision of which system should prevail in individual Federal order markets is so important that individual producers should be given the right to cast their own ballots rather than have the issue settled by bloc voting of cooperatives.

A major issue is whether these plans are to be used as supply management tools in conjunction with constrained quasi-supply-demand pricing--or whether supply control is to be the overriding issue. Given the necessary conditions for an effective supply control program and the likely differential effects, options open to cooperatives are:

- 1.--Using the blend pricing system as currently provided by most Federal orders;
- 2.--Proposing and arguing for the most restrictive Class I base plans possible under the Federal order system and living with the consequences;
- 3.--Operating their own supply management systems without having Class I base plans under the Federal order system;
- 4.--Superimposing their own supply management systems on base plans incorporated in Federal orders;
- 5.--Seeking revised Class I base plan legislation; and
- 6.--Seeking new legislation specifically authorizing a national quota program.

Ultimately, however, individual producers must answer some basic questions. Do dairy farmers want supply control and what form should the supply control system take? Since supply control and milk pricing are closely interrelated, who is to develop and administer the supply control and related pricing system? If a workable supply control and pricing system can be devised, can it be guided in the proper directions in the best longrun interests of dairy farmers, the industry, and society?

Definition of Terms

Base plan...Milk marketing plan containing a set of provisions whereby a producer who delivers milk to a market during a specified period of time establishes a claim or market right to supply the fluid (higher priced Class I) portion of the milk market during some subsequent time period.

Base milk...During a time period (month), the amount of milk delivered by a producer not exceeding his base previously determined for the period by a set of rules established by an administrative authority.

Excess milk...During a time period (month), the amount of milk delivered by a producer exceeding his base milk.

Open-base plan...Plan containing provisions which allow relatively easy entry of outside producers to a fluid (Class I) milk market and expansion of milk production by existing producers. Entirely new bases are assigned each year or provision is made for major base adjustments each year.

Closed-base plan...Plan containing provisions designed to foreclose the fluid (Class I) portion of a milk market to outside producers and to control the annual level of milk deliveries of producers normally associated with a designated market. The same bases are carried over from year to year with only minor adjustments in exceptional cases.

Base-excess seasonal plan...Relatively open base plan designed to encourage more uniform milk deliveries within the year. Entirely new bases are generally established each year during short-production months, according to a set of base rules. A producer who supplies a certain quantity of milk in the fall months when supplies are short establishes a claim or market right to supply the fluid (higher priced) portion of the market during months with a surplus.

Class I base plan...Relatively closed base plan where the base-building period is generally longer than 1 year and emphasis is more on annual than seasonal milk deliveries. Market rights of individual producers to the Class I sales of a market are generally established for periods longer than 1 year. These plans operate under the principle that a producer who supplies a market during some designated period of time--say a year or period of years--establishes a claim or market right to supply the higher priced fluid market during subsequent years.

Supply management...Use of a milk marketing plan designed to encourage an adequate but not excessive supply of milk for consumers in a designated market.

Supply control...Use of a milk marketing plan designed to discourage excess milk supplies when prices are above market clearing levels.

Appendix table 1.--Federal order markets with base-excess seasonal pricing plans, 1963 and 1971

Market <u>1/</u>	1963 <u>2/</u>	1971 <u>2/</u>
Appalachian	X	X
Black Hills	X	
Central Ark.	X	X
Central Miss. <u>3/</u>	X	
Chattanooga	X	
Chicago	X	
Clarksburg <u>4/</u>	X	
Des Moines	X	
E. S. Dakota <u>5/</u>	X	
Fort Smith	X	<u>X</u>
Georgia <u>6/</u>	<u>7/X</u>	<u>7/X</u>
Great Basin	X	
Kansas City	X	X
Knoxville	X	
Lubbock - Plainview	X	
Madison <u>8/</u>	X	
Memphis		X
Middle Atlantic <u>6/</u>		<u>7/X</u>
Milwaukee <u>8/</u>	X	
Minneapolis - St. Paul	X	
Miss. Delta <u>3/</u>	X	
Miss. Gulf Coast <u>3/</u>	X	
Muskegon <u>9/</u>	<u>7/X</u>	
Nashville	X	X
Neosho Valley	X	
New Orleans	X	X
N. Central Ohio <u>10/</u>	X	
N. Tex.	X	
N. E. Wisc. <u>8/</u>	X	
N. La.	X	
Ore.-Wash. <u>6/</u>		<u>7/X</u>
Puget Sound	<u>7/X</u>	<u>11/X</u>
Red River Valley	X	
Rock River Valley <u>8/</u>	X	
S. Bend - La Porte - Elkhart <u>12/</u>	X	
S. Mich.	<u>7/X</u>	<u>7/X</u>
Texas Panhandle	X	
Upper Chesapeake Bay <u>13/</u>	X	
Washington, D. C. <u>13/</u>	X	
Wheeling <u>4/</u>	X	

1/ Refer to map in figure 1 for exact location of market.2/ As of January 1.3/ Merged with Mississippi, 1965.4/ Merged with E. Ohio-W. Pa. May 5, 1969.5/ Merged with Sioux Falls-Mitchell May 1, 1965.6/ New Federal order market between 1963 and 1971.7/ Base plans using 12-month base payout.8/ Merged with Chicago Regional July 1, 1968.9/ Merged with S. Mich. Aug. 1, 1965.10/ Merged with N. W. Ohio Jan. 1, 1965.11/ Class I base plan effective Sept. 1, 1967.12/ Merged with Ind. Apr. 1, 1965.13/ Merged with Middle Atlantic Aug. 1, 1970.

LITERATURE CITED

(1) American Farm Bureau Federation
1969. An Analysis of the Puget Sound, Washington, Marketing Area
Class I Base Plan, prepared by Resear. and Commod. Activ. Div., Apr.

(2) Cummins, David E.
1970. Effects of Urban Expansion on Dairying in the Lake States,
1949-69. U.S. Dept. Agr., Agr. Econ. Rpt. 196, Dec.

(3) Knutson, Ronald D.
1971. Cooperative Bargaining Developments in the Dairy Industry,
1960-70. . . With Emphasis on the Central United States. U.S. Dept.
Agr., Farm. Coop. Serv. Res. Rpt. 19, Aug.

(4) Lasley, Floyd A., and Charles N. Shaw
1970. Economic Aspects of Dairying in the Northeast. U.S. Dept. Agr.,
Agr. Econ. Rpt. 188, July.

(5) Loring, Glenn
1965. A Tale of Two Markets. Farm Jour., Sept.

(6) U. S. Department of Agriculture
1969. Decision and Order to Terminate Proceedings on Proposed Amend-
ments to Tentative Marketing Agreement and Order. Fed. Regis., Vol.
34, No. 127, July 3.

(7) _____
1971. Decision on Proposed Amendments to Marketing Agreement and
Order. Fed. Regis., Vol. 36, No. 117, June 17.

(8) _____
1971. Decision on Proposed Amendments to Tentative Marketing Agreement
and Order. Fed. Regis., Vol. 36, No. 234, Dec. 7.

(9) Welden, Wm. C., and Louis F. Herrmann
1940. Base Allotment or Quota Plans Used by Farmers' Cooperative Milk
Associations. Farm Credit Admin., U.S. Dept. Agr., Misc. Rpt. 23,
May.